

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of group I in the reply filed on 3/11/08 is acknowledged.

Claim Objections

2. Claims 1, 8, and 11-14 are objected to because of the following informalities: they contain non-elected subject matter. Variables X^1 and X^4 can only be SH, and variables X^2 and X^3 can only be OH. Appropriate correction is required.

Specification

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Information Disclosure Statement

4. The information disclosure statement filed 5/17/2006 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered. Several of the references are in German or French and cannot be understood by the examiner.

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5. The information disclosure statement filed 5/17/2006 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. It has been placed in the application file, but the information referred to therein has not been considered.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 11-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. What monovalent ion is bonded to the manganese atom? What carboxylic acid or diamine is being used in the preparation of the elected group of compounds?

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-4, 6, and 8-10 are rejected under 35 U.S.C. 102(a) as being anticipated by Taeger et al. (WO 03/097880, published 27 November 2003). Taeger et al. teach compounds of formula Ia, Ia', and Ib. These compounds anticipate claims 8 and 9 because variables X¹ and X⁴ are each SH, X² and X³ are OH, and each instance of R¹ through R⁴ is hydrogen. The same

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process is described in the abstract and on bespiel 1.5 (page 12), so claims 1-4 and 6 are rejected. The specific enzyme used in this example is Basyzym L10.

10. Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

11. Claims 1-4, 6, and 8-10 are rejected under 35 U.S.C. 102(a) as being anticipated by Lemaire et al. (WO 2004038046). Lemaire et al. teach compounds Ia, Ia', and Ib (page 7). These compounds anticipate claims 8 and 9 because variables X^1 and X^4 are each SH, X^2 and X^3 are OH, and each instance of R^1 through R^4 is hydrogen. Thus claims 8-9 are rejected. Table 1 (page 17) and the abstract teach the same method as is described in the claims, and thus claims 1-4 and 6 are rejected. The specific enzyme used in this example is Basyzym L10.

12. Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

13. Claims 8-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Evans et al. (Journal of the Chemical Society, **1949**, 248-55). Evans et al. report compounds IV (page 248) and XXIII (page 250), which are both 1, 4-dithiothreitol. These compounds anticipate claims 8 and 9 because variables X^1 and X^4 are each SH, X^2 and X^3 are OH, and each instance of R^1 through R^4 is hydrogen.

14. Claim 7 is rejected under 35 U.S.C. 102(b) as being anticipated by Sorenson et al. (WO 96/17088, published 6 June 1996). Sorenson et al. teach bovine pelts (page 4). Since claim 7 is a product-by-process claim, Sorenson et al. anticipate claim 7.

15. Claims 1, 3-4, 6, and 8-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Baumgartner (US 5466579, issued November 14, 1995). Baumgartner teaches example 1,

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column 14-15. In this example, a hair sample is removed from skin, dissolved in water, and reacted with dithiotheitol and papainase. Thus, claims 1, 3-4, and 6 are rejected. Since DTT is encompassed by claims 8 and 9 (in DTT, variables X^1 and X^4 are each SH, X^2 and X^3 are OH, and each instance of R^1 through R^4 is hydrogen), these claims are anticipated as well.

Claim Rejections - 35 USC § 103

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

18. Claims 1-6 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taeger et al. (WO 03/097880, published 27 November 2003). Taeger et al. teach compounds of formula Ia, Ia', and Ib. These compounds render compounds of claims 10 because variables X^1 and X^4 are each SH, X^2 and X^3 are OH, and each instance of R^1 through R^4 is hydrogen. *Ex Parte Weston* (121 USPQ 498) teaches that H vs. Me is not deemed a patentable advance absent evidence of superior, unexpected results. The same process is described in the abstract and on bespiel 1.5 (page 12), so claims 1-6 are rejected. The specific enzyme used in this example is Basyzym L10.

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19. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Evans et al. (Journal of the Chemical Society, **1949**, 248-55). Evans et al. report compounds IV (page 248) and XXIII (page 250), which are both 1, 4-dithiothreitol. These compounds render compounds of claim 10 because variables X^1 and X^4 are each SH, X^2 and X^3 are OH, and each instance of R^1 through R^4 is hydrogen. *Ex Parte Weston* (121 USPQ 498) teaches that H vs. Me is not deemed a patentable advance absent evidence of superior, unexpected results.

Allowable Subject Matter

20. No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Noble Jarrell whose telephone number is (571) 272-9077. The examiner can normally be reached on M-F 7:30 A.M - 6:00 P.M. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. James O. Wilson can be reached on (571) 272-0661. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Noble Jarrell/
Examiner, Art Unit 1624

**/James O. Wilson/
Supervisory Patent Examiner, Art Unit 1624**

